

Work Order ID 52500

September 28, 2009 11:34:39 AM



Page 1

Item ID: D350-589-041

Accept



Setup Start



Revision ID: C

Stop



Item Name: Side Door Assembly LH

Start Date: 09/28/09 Start Qty: 1.00



Cust Item ID:

Required Date: 10/28/09 Req'd Qty: 1.00

Customer:

Reference: NCR09-085 / RA109094

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D2991

Rev C

100

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Original D350-589-041 B45404 CHG004, from NCR09-085. Damaged door in transit.

Door D2991-1 was only returned. No kit included, only the door assembly.

09-09-28

DART Dart Aerospace Ltd. 1270 ABERDEEN ST HAWKESBURY ON, CANADA K6A 1K7				TC APPROVAL # 09-89 TEL: 1-613-632-5200	
P.N.	D350-589-041	CHG	CHG004		
DESC.	Side Door Assembly, LH	STC	SH92-41		
LOT	B45404	STC	SH1012NE		
MODEL	AS350	STC			
MADE IN CANADA				D2729-1	

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Page 2

Item ID: D350-589-041

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Start Date: 09/28/09 Start Qty: 1.00

Required Date: 10/28/09 Req'd Qty: 1.00

Reference: NCR09-085 / RA109094

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

110

0.00



Small Fab

Small Fab

Memo

0.00

Disassemble the D2991-1 door for re-work. Ensure all parts are identified in a box for re-assembly.

Remove all gel coat; primer; laminate; etc as necessary in the affected area in accordance with QSI037 section 4.0.

Apply layers of lay-up in accordance with drawing requirements for this location, and QSI037 9.0.

Record materials used, in accordance with QSI006 & dwg specs:

demul B3721-2 M 45493
 Epocast M 112360
 9 oz cloth M 111166
 D2464 M 48173
 milled fibre M 100859
 D350589-041 M B45404

Fill the outer portion with gel coat per QSI 006, and sand the area smooth, and prepare for primer & paint.

See attached
Ref copy of
QSI037.
Jas 09/28

85 09-10-21

Work Order ID 52500

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Page 3

Item ID: D350-589-041

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Reference: NCR09-085 / RA109094

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

PB 09. 10. 21

130

Spray Painting per QSI005 4.2

0.00



SprayPaint

Memo

0.00

Spray Painting

Prime the inside of the door grey per QSI005.

M 112704

Mask off the interior of the door, and prepare the outside for white Imron per QSI005.

M 112384

ET 09 10 21

Work Order ID 52500

September 28, 2009 11:34:39 AM

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Required Date: 10/28/09 Req'd Qty: 1.00

Reference: NCR09-085 / RA109094

Cust Item ID:




Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140  QC Quality Control	QC14- Inspect Spray Paint Memo	0.00 0.00				<u>aml</u>	<u>09</u>	<u>10</u>	<u>21</u>
150  Small Fab Small Fab	Memo Re-assemble the door per IIN D350-589 and D2991 dwg, using the original hardware that was removed. Pick new D2464-1700 seal B <u>48(73)</u>	0.00 0.00				<u>RT</u>	<u>09-10-21</u>		
160  QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<u>2) 502/10/22</u>	<u>(70)</u>	<u>6</u>	

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Item ID: D350-589-041

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Setup Start



Revision ID: C

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Cust Item ID:

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Customer:

Reference: NCR09-085 / RA109094

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

170

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

9/10/23 (12) sel

180

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

See 10/26

(70) 0

190

Identify as per dwg & Stock Location: 116

0.00



Packaging

Memo

0.00

Packaging

Rec

9/10/26 (28)

See 10/26 @ CHG 1004

Return to stock using the new batch #. New decals; labels; and paperwork are required with the new batch.

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Customer:

Reference: NCR09-085 / RA109094

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

[Signature]
MF
09-10-27

Picklist Print

September 28, 2009 11:34:38 AM

Page 1 / 4

Work Order ID: 52500

Parent Item: D350-589-041RevC

Parent Item Name: Side Door Assembly LH

Comments:

Start Date: 09/28/09

Required Date: 10/28/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3-4A Bolt		Purchased	No			170	Each	2,179.000	6.0000			

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST	2179	
103915	120	
104214	500	
104291	300	
104322	200	
104374	200	
104625	300	
104817	559	

103915 SP

D2237RevD1

Manufactured No

170

Each

28.0000

4.0000

Striker Plate

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST	5	
46162	5	
Main Warehouse		
ST022	23	
50348	23	

50348 9/10/03 SP
48173 ST

D2464-1700RevB

Manufactured No

140

Each

0.0000

1.0000

Neoprene Seal

Picklist Print

September 28, 2009 11:34:38 AM

Page 2 14

Work Order ID: 52500

Parent Item: D350-589-041RevC

Parent Item Name: Side Door Assembly LH

Comments:

Start Date: 09/28/09

Required Date: 10/28/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

8 D2589RevA



Manufactured

No

170

Each

61.0000

1.0000

Keys, Key Chain, 350 Hinge

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

61

46840

21

50378

40

46840 SP

8 D3721-1RevA



Manufactured

No

170

Each

5.0000

1.0000

Decal

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

5

45492

5

45492 SP

8 D3894-1RevA



Manufactured

No

Each

15.0000

1.0000

Doubler

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

15

46896

15

46896 9/10/23 SP

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Shop Packet Print

Page 2

Picklist Print

September 28, 2009 11:34:38 AM

Page 3 / 4

Work Order ID: 52500

Parent Item: D350-589-041RevC

Parent Item Name: Side Door Assembly LH

Comments:

Start Date: 09/28/09

Required Date: 10/28/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3895-1RevA Doubler		Manufactured	No				Each	8.0000	1.0000			

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	8	
46897	8	

MS20470AD4-5 Rivet, Universal Head	Purchased	No					Each	3,447.000	8.0000			
---------------------------------------	-----------	----	--	--	--	--	------	-----------	--------	--	--	--

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	3447	
109031	447	
111916	3000	

46897-5f

111916 9/10/23 5f

Picklist Print

September 28, 2009 11:34:38 AM

Page 4 14

Work Order ID: 52500



Parent Item: D350-589-041RevC



Parent Item Name: Side Door Assembly LH

Start Date: 09/28/09

Required Date: 10/28/09

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
S MS21042L3 Nut		Purchased	No				Each	3,627.000	3,627.000			

Warehouse

Loc Qty

Loc Code 3

Location

Main Warehouse

ST

3627

110844

32

111274

103

111668

992

112314

2000

112385

500

111668 9/10/23 @ SP

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-589 REV. E AND EARLIER
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-589 REV. 1 AND EARLIER
REF. TCCA STC: SH92-41
REF. FAA STC: SH1012NE
REF. AUSTRIAN STC: ACG.21NE2.093

The purpose of this DSI is to provide instruction for the relocation of the door switch when the D35X-589-041/-042/-043 Side Door Assemblies are installed per D350-589 Rev. E and earlier and to clarify that the OEM center latch is not required with the D35X-589-041/-042/-043 kits.

The DSI 9446-011 Switch Relocation Kit may be installed by relocating the door switch using the following procedure:

- 1) Remove the existing door switch (p/n 2-5445), switch support (p/n 350A67-6323-32) and spring (p/n 350A67-6323-31) from the forward lower edge of the cargo compartment.
- 2) Position the D3894-1 switch plate near the bottom of the flange adjacent to the cargo compartment floor so that the switch will contact the door directly. See Figure 1.
- 3) Locate and drill 2x $\varnothing 0.129$ (#30 drill) holes from D3894-1 switch plate to the cargo compartment flange. Deburr holes and attach D3894-1 switch plate to the flange of the cargo compartment using 2x MS20470AD4 rivets.
- 4) Position the door switch in the hole provided in the D3894-1 switch plate.
- 5) Reconnect wiring to switch (if removed) and verify that switch operates correctly. It may be necessary to hand-form/trim the D3894-1 switch plate slightly to ensure that the switch contacts the door properly.

If the cargo compartment has a second switch installed in the center latch, it is not necessary to relocate this switch. The wiring should be removed and stowed so that this switch no longer turns on the cockpit indication.

There is no weight and balance change for the installation of the DSI 9446-011 switch relocation kit.

The D3894-1 switch plate will be included with D35X-589-041/-042/-043 kits at CHG 3 and subsequent.

PARTS LIST

QTY. -011	PART NUMBER	DESCRIPTION
X	DSI 9446-011	Switch Relocation Kit
1	D3894-1	Switch Plate







REFERENCE ONLY

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 09.02.03
CERT. NO.: SH92-41
ISSUE NO.: 7

A	NEW ISSUE		09.02.03
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9446	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		SWITCH RELOCATION	NTS
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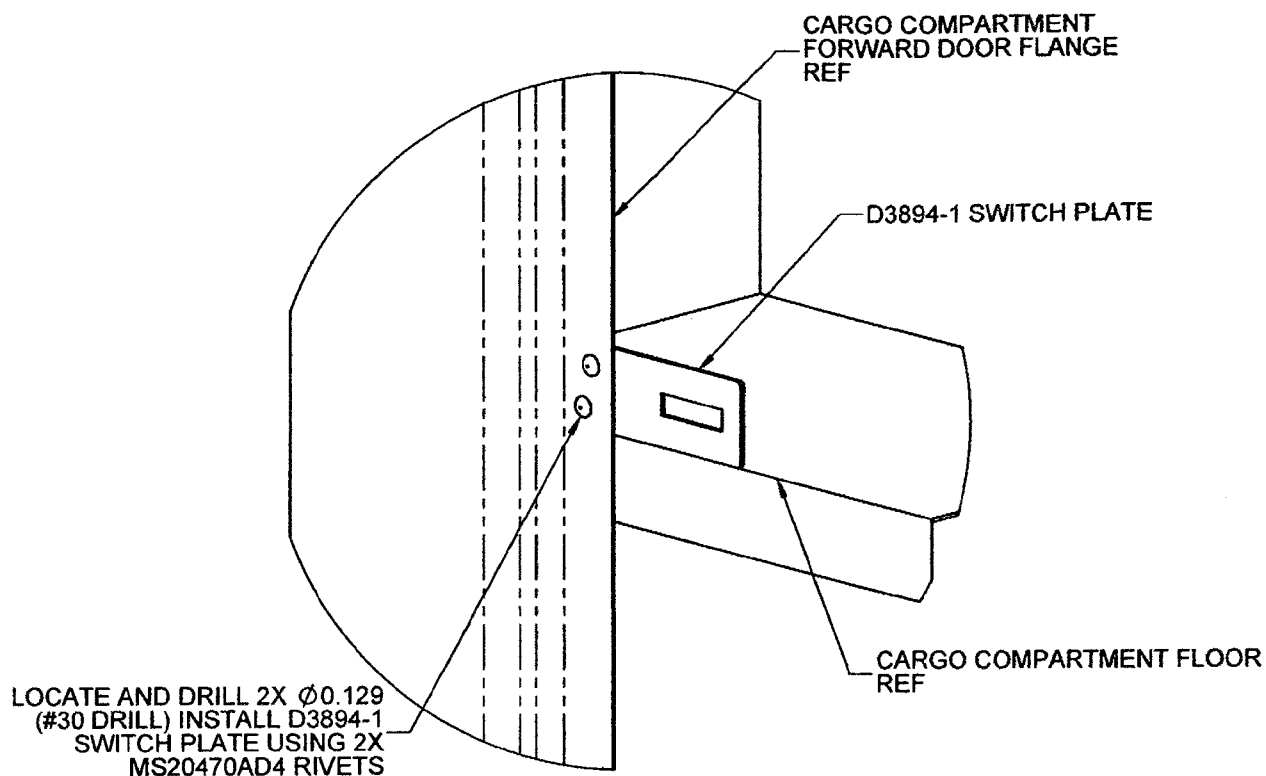


FIGURE 1: DSI 9446-011 SWITCH RELOCATION KIT INSTALLATION

REFERENCE ONLY

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DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 09.02.03
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ISSUE NO.: 7

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO. DSI 9446	REV. A
MFG. APPR.	N/A		SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE SWITCH RELOCATION	SCALE
DE APPR.	<i>[Signature]</i>		NTS
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DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-589 REV. E AND EARLIER
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-589 REV. 1 AND EARLIER
REF. TCCA STC: SH92-41
REF. FAA STC: SH1012NE
REF. AUSTRIAN STC: ACG.21NE2.093

The purpose of this DSI is to provide instruction for recessing the forward upper latch of the D35X-589-041/-042/-043 Side Door Assemblies for compatability with OEM sliding doors. Without this modification the OEM sliding door may contact the upper latch as the door is opened.

The DSI 9447-011 Latch Adjustment Kit may be installed as follows:

- 1) Remove sliding door guide (p/n 350A21-1375-21/-20) and shim (p/n 350A21-1376-20) from existing door and relocate to D35X-589-041/-042/-043 door assembly. See Figure 2 for drilling and repair details. Install using existing hardware.
- 2) Mark around the edge of the upper forward D2586 door latch on the outer door surface.
- 3) Remove the upper forward D2586 door latch and trim the hole to the line marked in the previous step. D2586 door latch should now be able to pass through the hole.
- 4) Position the D3895-1 doubler on the inside of the door with the cutout centered over the newly enlarged hole.
- 5) Transfer drill 16x $\varnothing 0.129$ (#30 drill) from the doubler to the D35X-589-041/-042/-043 side door. Countersink the 16 holes $\varnothing 0.179 \times 100^\circ$ from the outside of the door. Deburr holes and attach D3895-1 doubler to the D35X-589-041/-042/-043 door with qty. (16) MS20426AD4 rivets. See Figure 1.
- 6) Re-install the D2586 door latch per D350-589 and/or ICA-D350-589.
- 7) Verify that the door closes and latches correctly. Adjust latches per ICA-D350-589.
- 8) Apply blade tape (Ref. 3M p/n 8560-2) to the D35X-589-041/-042/-043 side door to prevent contact wear from the OEM sliding door.

There is no weight and balance change for the installation of the DSI 9447-011 latch adjustment kit.

The D3895-1 doubler will be included with D35X-589-041/-042/-043 kits at CHG 3 and subsequent.

PARTS LIST

QTY. -011	PART NUMBER	DESCRIPTION
X	DSI 9447-011	Latch Adjustment Kit
1	D3895-1	Doubler







REFERENCE ONLY

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 09.02.04
CERT. NO.: SH92-41
ISSUE NO.: 7

A	NEW ISSUE		09.02.04
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9447	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		LATCH ADJUSTMENT	NTS
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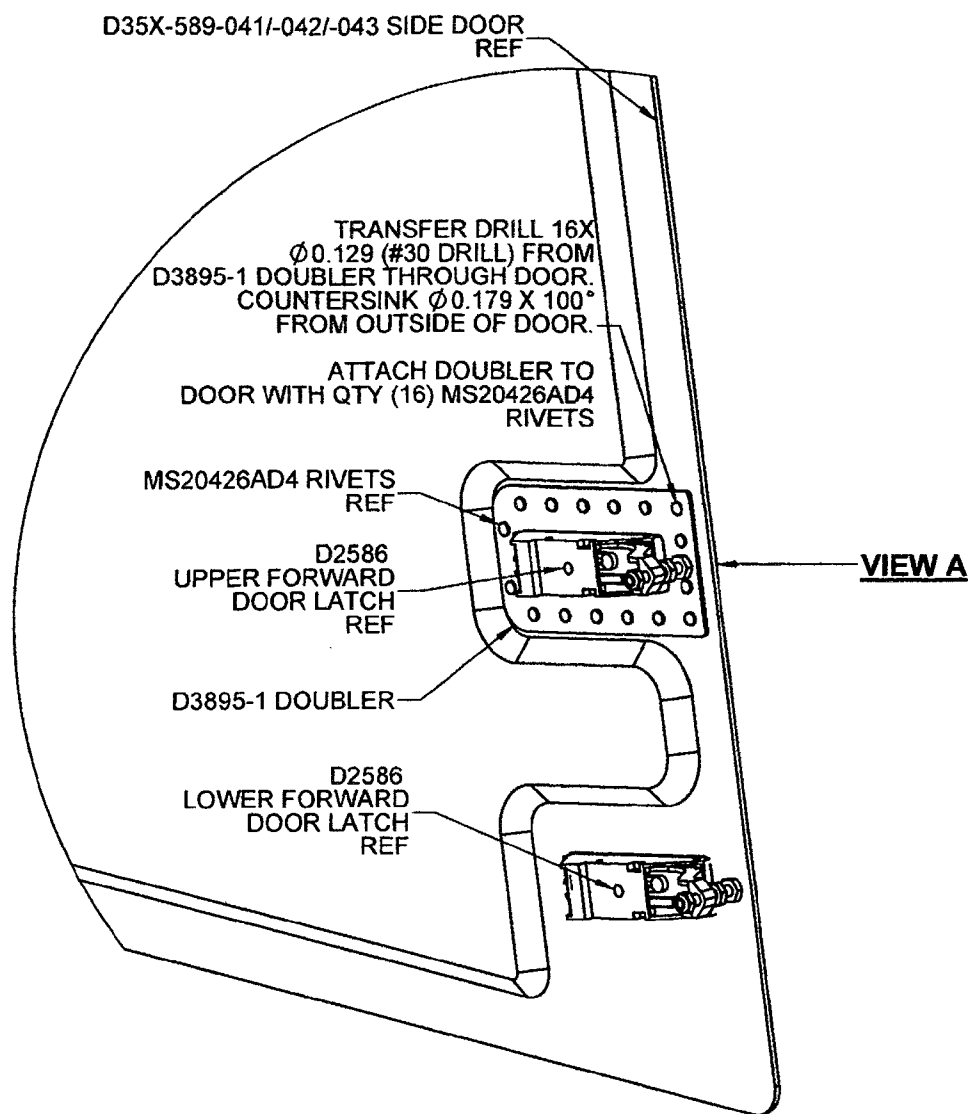


FIGURE 1: DSI 9447-011 LATCH ADJUSTMENT KIT INSTALLATION

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BRANCH
DAO # 01-O-01

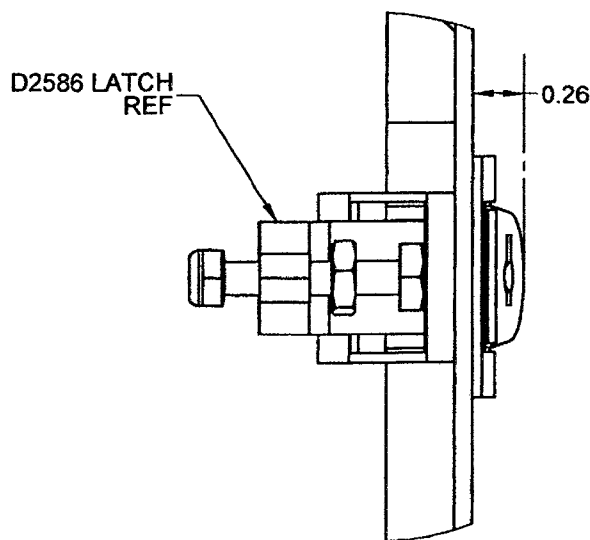
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BY: *[Signature]*
D. SHEPHERD (DE # 02)

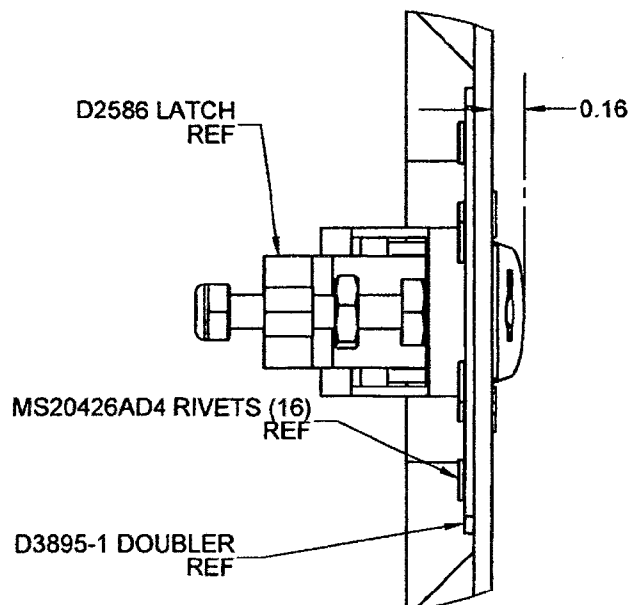
DATE: 09.02.04
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ISSUE NO.: 7

REFERENCE ONLY

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DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO. DSI 9447	REV. A
MFG. APPR.	N/A		SHEET 2 OF 3
APPROVED	<i>[Signature]</i>	TITLE LATCH ADJUSTMENT	SCALE
DE APPR.	<i>[Signature]</i>		NTS
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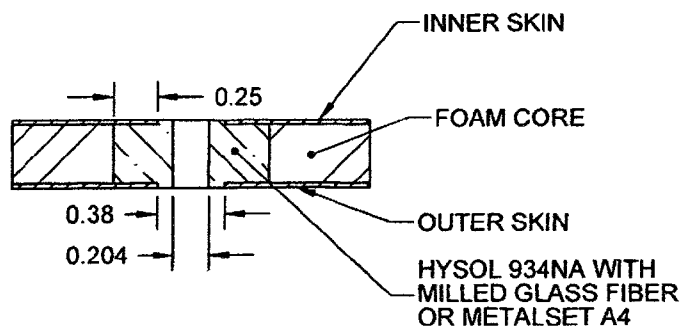
VIEW A - BEFORE DSI 9447-011



VIEW A - AFTER DSI 9447-011

**AT EACH FASTENER LOCATION FOR
P/N 350A21-1375-21/-20 GUIDE**

- DRILL $\varnothing 0.38$ HOLE THRU DOOR. REMOVE THE FOAM INNER LAYER 0.25 AROUND THE HOLE BETWEEN THE INNER AND OUTER SKINS.
- APPLY TAPE OR EQUIVALENT BACKER TO THE INNER SIDE OF THE HOLES TO PREVENT EPOXY FILLER FROM GOING THROUGH.
- FILL THE CAVITY BETWEEN THE SKINS COMPLETELY WITH HYSOL 934NA MIXED WITH MILLED GLASS FIBERS TO A RATIO OF 10:1 OR METALSET A4.
- ALLOW THE MATERIAL TO CURE.
- DRILL $\varnothing 0.204$ (#6 DRILL) THRU 2 PL
- SEE REPAIR DETAIL.



**FIGURE 2
GUIDE INSTALLATION
REPAIR AND DRILLING DETAIL**

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 09.02.04
CERT. NO.: SH92-41
ISSUE NO.: 7

REFERENCE ONLY

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9447	SHEET 3 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	LATCH ADJUSTMENT	NTS
DATE	09.02.04	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

3.4 **PARTS LIST**

589 -011	589 -041	589 -042	589 -043	Part Number	Description
X				D350-589-011	SIDE DOOR LATCH MODIFICATION KIT
	X			D350-589-041	SIDE DOOR ASSEMBLY, LH AS 350
		X		D350-589-042	SIDE DOOR ASSEMBLY, RH AS 350/355
			X	D355-589-043	SIDE DOOR ASSEMBLY, LH AS 355
	1			D2991-1	Door
		1		D2991-2	Door
			1	D2991-3	Door
3	3	3	3	D2237	Striker Plate
	1	1	1	D2464-1700	Seal
3				D2583	Latch Bracket
3	3	3	3	D2585	Latch Clamp
3	3	3	3	D2586	Latch
1				D2587	Plug
1	1	1	1	D2589	Keys, Key Chain
	3	3	3	D2621	Latch Plate
	2**	2**	2**	D2992-1	Doubler
	1	1	1	D3085-041	Prop Assembly
	1*	1*	1*	D3015-3	Locknut
	1*	1*	1*	D3081-1	Prop Hinge
	1*	1*	1*	D3082-1	Clip
	1*	1*	1*	D3084-1	Prop Arm
	1*	1*	1*	AN4-5A	Bolt
	3*	3*	3*	AN960JD10	Washer
	3*	3*	3*	AN960JD10L	Washer
	2*	2*	2*	AN960JD416	Washer
	1*	1*	1*	AN960JD516L	Washer
	3*	3*	3*	MS21042L3	Nut (or MS21042-3)
	1*	1*	1*	MS21042L4	Nut (or MS21042-4)
	3*	3*	3*	MS27039-1-13	Screw
	1*	1*	1*	SL69-BS	Ball Stud
	6	6	6	AN3-4A	Bolt
3	3	3	3	AN960JD10	Washer
3	9	9	9	MS21042L3	Nut (or MS21042-3)
6	6	6	6	MS20470AD4-5	Rivet
3	3	3	3	MS27039-1-15	Screw

* Reference only. Included in D3085-041 Prop Assembly listed above.

** Reference only. Included in D2991-1/-2/-3 Doors listed above.

REFERENCE ONLY

Date: Wednesday, 18/02/2009 2:54:38 PM
 User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SIDE DOOR
 Job Number : 45404
 Estimate Number : 12295
 P.O. Number :
 This Issue : 18/02/2009 S.O. No. : Part Number : D350589041
 Drawing Number : D2991 REV.C
 Prsht Rev. : NC Project Number : N/A
 First Issue : 02/02/2009 Type : PURCHASED PARTS Drawing Revision : C
 Previous Run : 45403 Material :
 Due Date : 20/02/2009 Qty: 1 Um: Each
 Written By :
 Checked & Approved By :
 Comment : est rev. A 06.02.16 new issue (was done on D350-589-041)
 EC
 Est Rev:B 08-02-20 ECN 1096 DD verified by:EC
 est rev C 08.06.26 Revised pik list per QC comment (w/o
 25885) EC verified: DD



Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D350-589-041

CHC003

6 HG 004

pro 09/05/2010 for

2.0 OUTSIDE SERVICE OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Issue P/O: 8112

Cdo 9/02/03 ①

Description: D2991-1 side door

Supplier: Delastek

batch:

Ship to delastek: Qty 2 D2992-1 Doublor

B28743

Cdo 9/02/03 ②

Ensure batch # on Label D3721-1 match W/O # for D350-589-041

Certificate of Conformity and process sheet from Delastek is required

B4667 Cdo 9/03/25 ③
B46789 Cdo 9/04/15 ④

3.0 D29921 Doublor



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Doublor

Cdo 9/02/03

4.0 D29911 Side Door





Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Side Door

REFERENCE ONLY

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
09.04.27	1	DZ992-1 NOW WIDER KIT @ CHG 004				 09.04.27	 09.05.29

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
REFERENCE ONLY								

NOTE: Date & initial all entries

Date: Wednesday, 18/02/2009 2:54:38 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SIDE DOOR

Job Number: 45404

Part Number: D350589041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

**ENGINEERING
APPROVAL**

C 209/105/28 ① 09.05.28

6.0

QC6

DIMENSIONAL CHECK



Comment: Ensure Material certification comply to Dwg D2991

09.05.28 ①

7.0

D24641700

Neoprene Seal



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty	Part number	Description
1	D2464-1700	Foam seal

Batch

1339669

090529

8.0

D2585

Mounting Channel



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

Pick:

Qty	Part number	Description
3	D2585	Latch clamp

Batch

45815

4 DS19463

PTO →

09/05/29 ①

9.0

D2586

Door Latch



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

Pick:

Qty	Part number	Description
3	D2586	Door latch

Batch

45554

4 DS19463

09/05/29 ①

10.0

D2621

Latch Plate, 350 Spacepod



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

Pick:

Qty	Part number	Description
3	D2621	latch plate

Batch

41175

4 DS19463

09/05/29 ①

REFERENCE ONLY

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
090529	8.	quantity changed to accommodate DSI 9463 9463 (Latch and Hardware)	<i>[Signature]</i>	090529	1	<i>[Signature]</i> 090529 P 051042	<i>[Signature]</i> 090529

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
REFERENCE ONLY								

NOTE: Date & initial all entries

Date: Wednesday, 18/02/2009 2:54:38 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SIDE DOOR

Job Number: 45404

Part Number: D350589041

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

D3085041

prop ass'y



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part number Description
1 D3085-041 prop ass'y

Batch

B45557

8809105/29 (X)

12.0

MS21042L3

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)

Pick:

Qty Part number Description
6 MS21042L3 Nut

Batch

M11844

700 DSI 9463

8809105/29 (X)

13.0

AN960JD10

Washer



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

Pick:

Qty Part number Description
3 AN960JD10 Washer

Batch

M111279

4 00 DSI 9463

PTO
8809105/29 (X)

14.0

MS27039115

Screw



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

Pick:

Qty Part number Description
3 MS27039-1-15 Screw

Batch

M110915

4 00 DSI 9463

8809105/29 (X)

15.0

D37211

Decal



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Decal

batch:

45492

8809105/29 (X)

16.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble as per dwg D2991 & IIN D350-589 and install label as per dwg

090528 PTO →

REFERENCE ONLY

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
090529	16.	core removed and two layers of 9oz cloth to accomodate Latch placement of DS1 9463 9oz cloth FG78150 J50 M111166 9330 Hysol M110970	W	09-05-28	1	CP 09.04.25 pc 05/012	09-05-29	
090529	13	Change washers to 10L M109632 Permanent Change	W	090529	1	VB 090529	09-05-29	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 18/02/2009 2:54:39 PM

User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SIDE DOOR

Job Number: 45404

Part Number: D350589041

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09.05.29 @

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick list:

19.0

D38941

Switch Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Switch Plate

Batch: 46896

09/05/29 @

20.0

D38951

Doubler



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Doubler

Batch: 45585

09/05/29 @

21.0

D2237

Striker Plate



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

Pick:

Qty

Part number

Description

Batch

4

D2237

Striker Plate

46162

DSI 9463

09/05/29 @

22.0

D2589

Keys, Key Chain, 350 Hinge



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty

Part number

Description

Batch

1

D2589

keys, key chain

46840

09/05/29 @

23.0

AN34A

Bolt



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)

Pick:

Qty

Part number

Description

Batch

6

AN3-4A

Bolt

M103915

REFERENCE ONLY

09/05/29 @

Date: Wednesday, 18/02/2009 2:54:39 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SIDE DOOR

Job Number: 45404

Part Number: D350589041

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

MS20470AD45

Rivet, Universal Head



Comment: Qty.: 6.0000 Each(s)/Unit Total: ~~6.0000~~ Each(s) 8 ~~10~~ DSI 9463

Pick:

Qty Part number Description Batch

MS20470AD4-5 Rivet

M 09031

8809105/29 RF

25.0

MS21042L3

Nut



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

Nut

M 110844

8809105/29 RF

26.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

09105/29 RF

27.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: E

9/6/29

1/2

8

28.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

1 09105/29

Job Completion



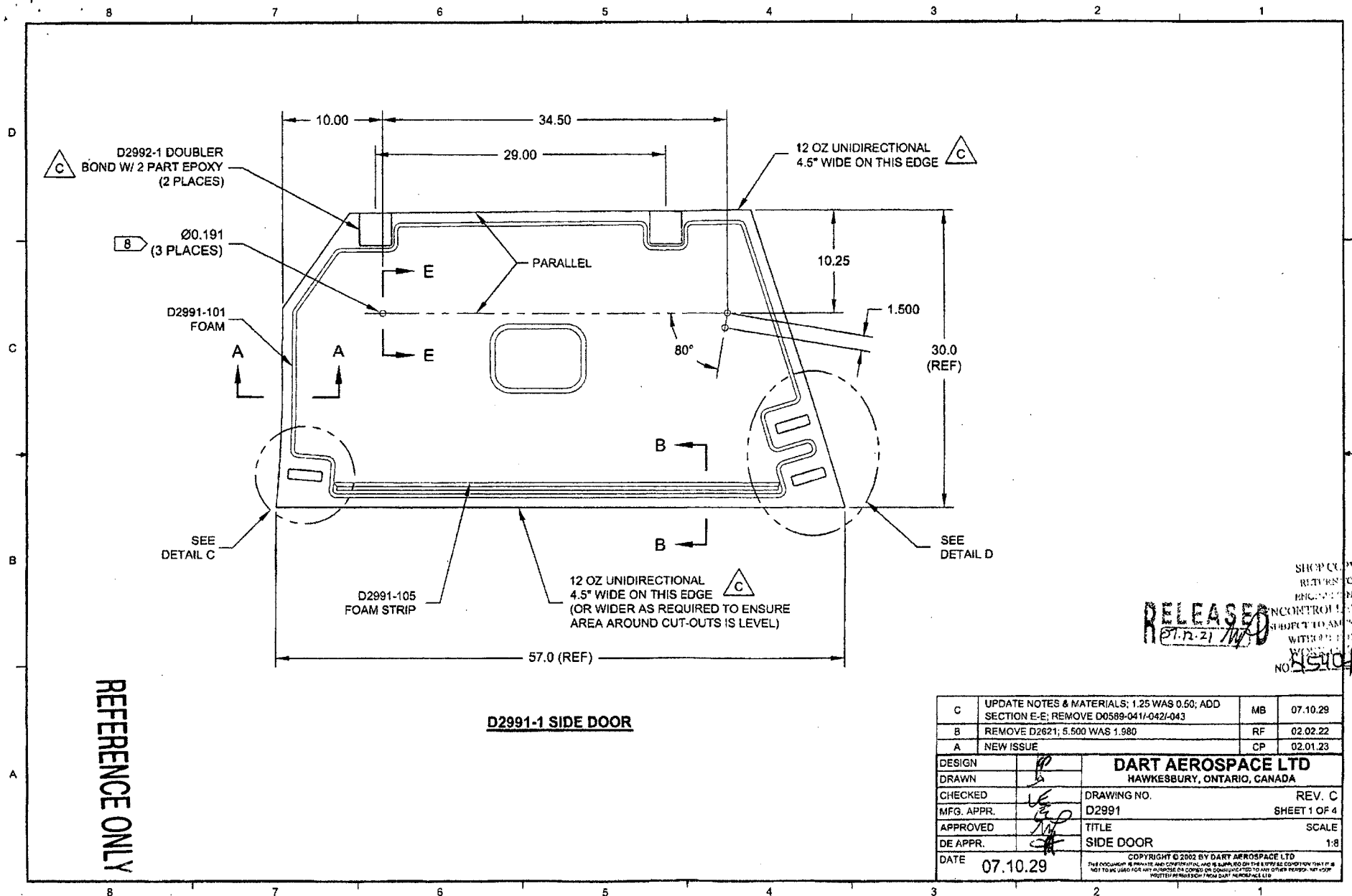
POSITIVE RECALL

EFFECTIVE 09.04.29 AUTH UP

RELEASED UP DATE 09.05.29

MF 09-05-29

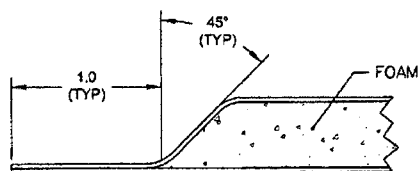
REFERENCE ONLY



C	UPDATE NOTES & MATERIALS; 1.25 WAS 0.50; ADD SECTION E-E; REMOVE D0589-041/-042/-043	MB	07.10.29
B	REMOVE D2621; 5.500 WAS 1.980	RF	02.02.22
A	NEW ISSUE	CP	02.01.23
DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>[Signature]</i>		
CHECKED	<i>[Signature]</i>		
MFG. APPR.	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DE APPR.	<i>[Signature]</i>	SIDE DOOR SCALE: 1:8	
DATE	07.10.29	<small>COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMBINED OR DISCLOSED TO ANY OTHER PERSON, WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

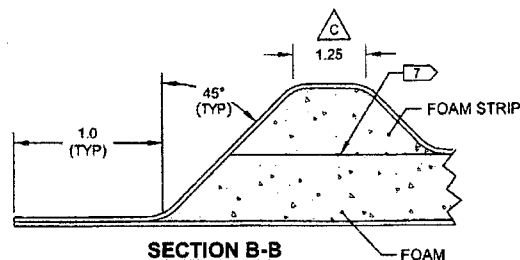
RELEASED
21-2-21

STAMP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITH NO EFFECT
NO 15104



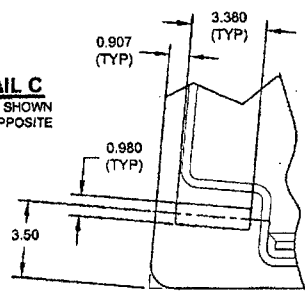
SECTION A-A

NOT TO SCALE
D2991-1/3 SHOWN
D2991-2 OPPOSITE



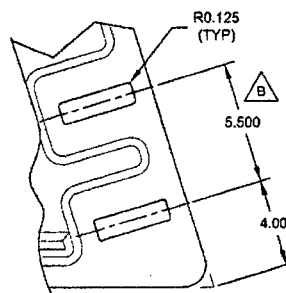
SECTION B-B

ONE EDGE ONLY
NOT TO SCALE, VIEW ROTATED
D2991-1/3 SHOWN
D2991-2 OPPOSITE



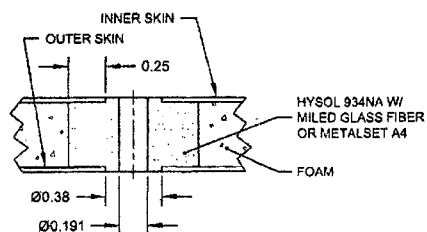
DETAIL C

D2991-1/3 SHOWN
D2991-2 OPPOSITE



DETAIL D

D2991-1/3 SHOWN
D2991-2 OPPOSITE



SECTION E-E

TYPICAL Ø0.191
HOLE DETAIL
NOT TO SCALE

NOTES FOR D2991-1/-2/-3

- 1) LAYUP PER QSI 006 AND AS FOLLOWS
- 2) MATERIALS:
RESIN: EPOCAST 50-A/9816 OR DERAKANE 470-36/411/510A40
FOAM: 3/8", A500 CORE-CELL OR DIVINYLCELL OR AIREX OR KLEGECELL
FIBRE: 9.7 OZ 7781 WEAVE "S" GLASS ("9 OZ SATIN")
12 OZ UNIDIRECTIONAL FIBERGLASS ("12 OZ UNIDIRECTIONAL")
- 3) FINISH INSIDE WITH DUPONT HIGHBUILD PRIMER GREY #1104S OR #1144S
- 4) USE MOLD DT8626 FOR D2991-1 SIDE DOOR
USE MOLD DT8627 FOR D2991-2 SIDE DOOR
USE MOLD DT8628 FOR D2991-3 SIDE DOOR (TRIM PER DT8631)
- 5) ROUTER FOAM CORE USING: DT8628 FOR D2991-1 SIDE DOOR
DT8629 FOR D2991-2 SIDE DOOR
DT8630 FOR D2991-3 SIDE DOOR
- 6) MAIN LAYUP: WHITE GLOSS GELCOAT #GEL 944W005
9 OZ SATIN
9 OZ SATIN
FOAM
FOAM STRIP
9 OZ SATIN
12 OZ UNIDIRECTIONAL (4.5" WIDE, 2 EDGES SHOWN)
9 OZ SATIN
RESIN (35-45% BY WEIGHT)
PEEL PLY
- 7) BOND FOAM CORE USING POLYBOND B46F
- 8) DRILL Ø0.38 HOLE. REMOVE THE FOAM INNER LAYER 0.25 AROUND THE HOLE BETWEEN THE INNER AND OUTER SKINS. APPLY TAPE OR AN EQUIVALENT BACKER TO THE INNER SIDE OF THE HOLES TO PREVENT EPOXY FILLER FROM GOING THROUGH. FILL THE CAVITY BETWEEN THE SKINS COMPLETELY WITH HYSOL 934NA MIXED WITH MILED GLASS FIBERS TO A RATIO OF 10:1 OR METALSET A4. ALLOW THE MATERIAL TO CURE. DRILL Ø0.191 THROUGH, 3 PLACES PER DOOR. SEE SECTION E-E.
- 9) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 10) UNITS: INCHES UNLESS OTHERWISE NOTED
- 11) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 12) IDENTIFICATION: PER D2991-1/-2/-3 PPPs.
- 13) WEIGHT: 9 lbs (TYP)

REFERENCE ONLY

RELEASED
07.12.21

DESIGN	10	DART AEROSPACE LTD	
DRAWN	10	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. C
MFG. APPR.	10	D2991	SHEET 4 OF 4
APPROVED	10	TITLE	SCALE
DE APPR.	10	SIDE DOOR	1:
DATE	07.10.29	COPYRIGHT © 2002 BY DART AEROSPACE LTD	
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DART AEROSPACE LTD

QUALITY SYSTEM INSTRUCTION: QSI 037

TITLE: Composite Repair Manual

ISSUE: 02

DATE: December 1, 2005

PREPARED BY: Roberto Fuentes

REVIEWED BY:

**Linda Lacelle
PRODUCTION MANAGER**

**David Shepherd
CHIEF ENGINEER**

**Bill Beckett
DESIGN MANAGER**

APPROVED BY:

**Susanne Sheldon
Director, Quality Assurance**

REFERENCE ONLY



ISSUE REVISION: A

PAGE	PAGE REV.	SUBJECT	DATE	INITIAL	DQA
1	A	Revised page 1			
2	A	Revised page revision sheet			
3	A	Revised sections 1.0 to 5.0			
4	A	No change			
5	A	Revised section 9.0			
6	A	Revised section 9.1			
7	A	Revised section 9.2			
8	A	Revised section 9.3			
9	A	Revised section 9.4			
10	A	Revised section 9.5			
11	A	Revised section 9.6			
12	A	Revised section 9.7			
13	A	Revised section 9.8			

REFERENCE ONLY



1.0 PURPOSE

THE PURPOSE OF THIS MANUAL IS TO ESTABLISH THE METHODS FOR REPAIR/RE-WORK OF DART COMPOSITE PARTS. THIS MANUAL IS TO BE USED IN CONJUNCTION WITH THE APPROPRIATE DART APPROVED INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA), DART APPROVED MAINTENANCE MANUAL SUPPLEMENTS (MMS), OR DART APPROVED REPAIR/RE-WORK SCHEMES.

2.0 SCOPE

THIS MANUAL IS ONLY TO BE USED FOR THE REPAIR/RE-WORK OF DART COMPOSITE PARTS WITH WRITTEN PERMISSION FROM DART AEROSPACE LTD. OR WHEN REFERENCED IN A DART APPROVED ICA, MMS, OR REPAIR/RE-WORK SCHEME.

3.0 RESPONSIBILITY

3.1 INTERNAL

3.1.1 PRODUCTION MANAGER

HAS THE RESPONSIBILITY FOR ENSURING THAT INTERNAL COMPOSITE RE-WORK IS COMPLETED IN ACCORDANCE WITH THIS WORK INSTRUCTION.

3.1.2 DIRECTOR, QUALITY ASSURANCE

IS RESPONSIBLE FOR AUDITING THAT THESE INSTRUCTIONS ARE BEING FOLLOWED FOR COMPOSITE RE-WORK.

3.2 EXTERNAL

THE EXTERNAL USE OF THIS REPAIR MANUAL IS THE RESPONSIBILITY OF THE OPERATOR OF THE AIRCRAFT.

4.0 SURFACE PREPARATION

4.1 SURFACE PREPARATION IS A MANDATORY REQUIREMENT FOR ALL PARTS PRIOR TO REPAIR. PAINT, PRIMER, DAMAGED LAMINATE, FOAM, AND SURFACE GLASS MUST BE REMOVED FROM THE DAMAGED AREA.

4.2 REMOVE THE DUST AND GREASE USING ACETONE OR EQUIVALENT SOLVENT. WIPE THE SOLVENT BEFORE DRYING.

5.0 LIMITATION

5.1 DAMAGE AREA: THE TOTAL DAMAGE AREA IN ONE PART SHALL NOT BE LARGER THAN 20% OF THE PART SURFACE AREA.

5.2 DEVIATION: A SEPARATE REPAIR SCHEME SHALL BE CREATED BY DART ENGINEERING IN ONE OR MORE OF THE FOLLOWING SITUATIONS:

- 1) THE TOTAL DAMAGE AREA IN THE REPAIR PART EXCEEDS 20% OF ITS SURFACE AREA.
- 2) THE DAMAGE SIZE EXCEEDS THE LIMITATION AS INDICATED IN THE APPLICABLE REPAIR SCHEME.
- 3) THE REPAIR METHOD IS NOT DESCRIBED IN THIS SPECIFICATION.

REFERENCE ONLY

**6.0 CALCULATING RESIN TO FIBER RATIO – WET LAY UP****6.1 CALCULATING RESIN WEIGHT:** (IDEAL RATIO IS 40% RESIN TO 60% FIBER BY WEIGHT).

NOTE: ACCEPTABLE RANGE IS 35%-45% RESIN BY WEIGHT

CLOTH WEIGHT / 0.6 (60%) = TOTAL WEIGHT.

TOTAL WEIGHT – CLOTH WEIGHT = RESIN WEIGHT.

EXAMPLE: 90 GRAMS CLOTH / 0.6 = 150 GRAMS TOTAL WEIGHT.

150 – 90 = 60 GRAMS RESIN WEIGHT.

6.2 CALCULATING ACTUAL RATIO:

ACTUAL TOTAL WEIGHT – CLOTH WEIGHT = RESIN WEIGHT.

RESIN WEIGHT / TOTAL WEIGHT = RESIN %

EXAMPLE: 165 GRAM ACTUAL WEIGHT – 90 GRAMS CLOTH = 75 GRAMS RESIN.

75 / 165 = 0.45 (OR 45%) RESIN.

THEREFORE, RATIO IS 45% RESIN TO 55% FIBER.

7.0 MATERIALS**7.1 FIBERGLASS FABRICS.**

MATERIAL	SPECIFICATION	SUPPLIER
9 oz CLOTH	9 oz "S" GLASS UNIVERSAL WEAVE Volan A Fiber Glass Cloth	LOCAL
18 oz CLOTH	18 oz ROVING "E" GLASS 2 Layers of 9 oz.	LOCAL

7.2 ACCEPTABLE ADHESIVES/RESINS.

ADHESIVES	SUPPLIER	PURPOSE
EPOCAST 50-A/9816	CIBA GEIGY	LAMINATING
HYSOL EA 956 A & B	HYSOL	LAMINATING/POTTING
HYSOL EA 9309.3 NA	HYSOL	LAMINATING/POTTING
HYSOL EA 9330	HYSOL	LAMINATING
HYSOL EA 9330.3	HYSOL	LAMINATING
HYSOL EA 9359.3	HYSOL	LAMINATING
MAGNOBOND 6398	MAGNOBOND	LAMINATING

7.3 ACCEPTABLE FILLERS.

FILLER	SUPPLIER
MILLED FIBERS, E-GLASS	CIBA GEIGY
K20 GLASS BUBBLES	3 M
EPOCAST 1618 A & B	CIBA GEIGY

REFERENCE ONLY

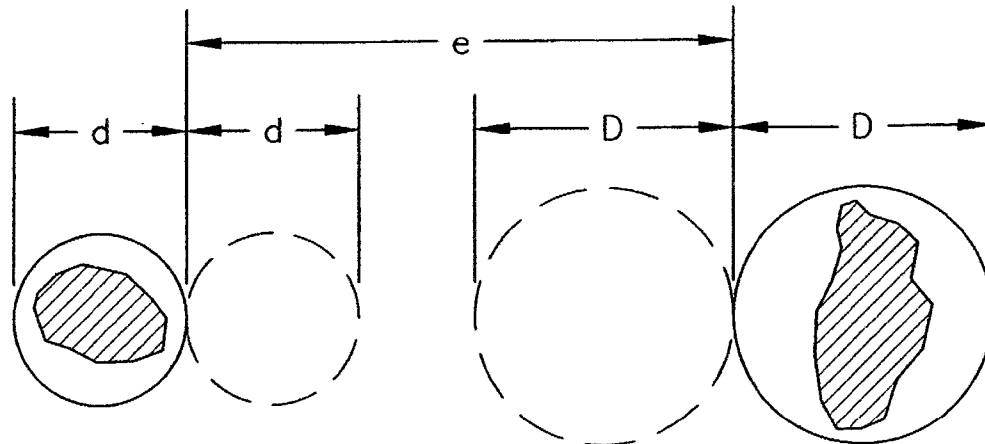
7.4 ACCEPTABLE FOAM CORES.

FOAM CORE	POSSIBLE SUPPLIER
A500 CORE CELL	ETC CHEMICALS
DIVINYCELL	DIAB INC.

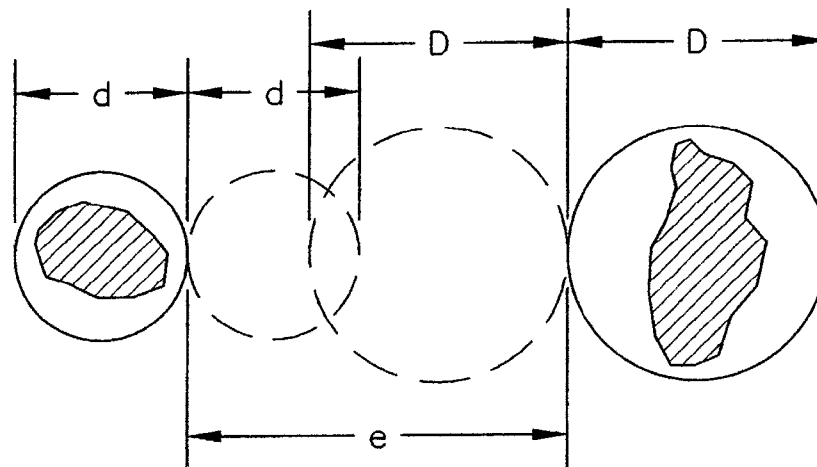


8.0

ADJACENT DEFECTS



IF e IS $\geq d + D$ AS SHOWN ABOVE THEN
CONSIDER AS SEPARATE DAMAGED AREA



IF $e < d + D$ AS SHOWN ABOVE THEN
CONSIDER AS SINGLE DAMAGED AREA

REFERENCE ONLY

9.0

PROCEDURE

SEE THE PAGES THAT FOLLOW FOR THE DETAILS OF THE ALLOWABLE COMPOSITE REPAIRS.



9.1 HOLE REPAIR IN COMPOSITE SKIN

SECT.	INSTRUCTION	DIAGRAM
9.1.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	
9.1.2	CUT OUT THE HOLE BY REMOVING THE AREA 0.125" (3 mm) BEYOND THE END OF ANY CRACKS AT THE EDGES OF THE HOLE.	
9.1.3	IF THE OPENING AREA IS EQUAL TO OR SMALLER THAN 2.0" (50 mm) x 2.0" (50 mm) FILL UP THE OPENING WITH ADHESIVE PASTE (MIXTURE OF RESIN WITH MILLED FIBERGLASS AND K20 GLASS BUBBLES) FOR DESIRED THICKNESS.	
9.1.4	IF THE OPENING AREA IS LARGER THAN 2.0" (50 mm) x 2.0" (50 mm), BUT SMALLER THAN 8.0" (200 mm) x 8.0" (200 mm), BOND A PRE-CURED FIBERGLASS SHEET IN THE OPENING WITH ADHESIVE PASTE. THE PRE-CURED SHEET SHALL BE THE SAME THICKNESS AND SIZE OF THE OPENING.	
9.1.5	LAY UP 3 PLIES OF 9 oz CLOTH ON BOTH SIDES OF THE OPENING WITH RESIN. CURE AT ROOM TEMPERATURE.	
9.1.6	SMOOTH APPLIED AREA.	
9.1.7	PAINT TO MATCH COLOR.	

REFERENCE ONLY

9.2

FOAM CORE REPAIR OF THROUGH HOLE DAMAGE

SECT.	DESCRIPTION	DIAGRAM
9.2.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	
9.2.2	CUT A HOLE THROUGH THE SKIN AND CORE TO REMOVE DAMAGE. FILL THE VOID WITH FOAM THE SAME THICKNESS AND SIZE AS THE OPENING USING RESIN AS A FILLER. USE A BACKING PLATE WITH RELEASE FILM AS SHOWN TO KEEP THE RESIN IN PLACE. CURE AT ROOM TEMPERATURE.	
9.2.3	LAY UP 3 PLIES OF 9 oz CLOTH ON BOTH SIDES OF THE OPENING WITH RESIN. CURE AT ROOM TEMPERATURE.	
9.2.4	SMOOTH APPLIED AREA.	SECTION B-B
9.2.5	PAINT TO MATCH COLOR.	

REFERENCE ONLY

9.3 CORE DENT REPAIR

SECT.	DESCRIPTION	DIAGRAM
9.3.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	<p>SECTION C-C</p>
9.3.2	CUT AWAY SKIN AND CORE. CLEAN. APPLY ADHESIVE TO INSIDE FACE OF OUTER SKIN AND TO THE WALL OF THE CUTAWAY CORE. INSERT NEW FOAM CORE PATCH THE SAME SIZE AND THICKNESS AS THE OPENING. CURE AT ROOM TEMPERATURE.	<p>SECTION C-C</p>
9.3.3	LAY UP 3 PLYS OF 9 oz CLOTH ON THE EXTERIOR SURFACE OF THE OPENING. CURE AT ROOM TEMPERATURE.	<p>SECTION C-C</p>
9.3.4	SMOOTH APPLIED AREA.	
9.3.5	PAINT TO MATCH COLOR.	

REFERENCE ONLY

9.4

EDGE REPAIR

SECT.	DESCRIPTION	DIAGRAM
9.4.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	<p>DAMAGE AREA</p> <p>COMPOSITE SKIN</p> <p>SECTION TO RE-BUILD</p> <p>COMPOSITE SKIN</p> <p>SECTION D-D</p>
9.4.2	LAY UP 9 oz CLOTH WITH RESIN TO MATCH ORIGINAL THICKNESS OF THE SECTION. CURE AT ROOM TEMPERATURE. USE A BACKING PLATE WITH RELEASE FILM, WHERE SECTION NEEDS TO BE RE-BUILT.	<p>LAY UP ORIGINAL THICKNESS WITH 9 oz CLOTH</p> <p>BACKING PLATE WITH RELEASE FILM</p> <p>SECTION D-D</p>
9.4.3	REMOVE THE BACKING PLATE AND RELEASE FILM AFTER CURING. LAY UP 2 PLIES OF 9 oz CLOTH ON BOTTOM OF PREVIOUS PLIES AS SHOWN, CURE AT ROOM TEMPERATURE.	<p>2.0" (50 mm)</p> <p>1.5" (38 mm)</p> <p>1.0" (25 mm)</p> <p>2 PLIES OF 9 oz CLOTH</p> <p>SECTION D-D</p>
9.4.4	AFTER CURING, SMOOTH THE SURFACE AND TRIM EDGES TO MATCH PROFILE.	
9.4.5	PAINT TO MATCH COLOR.	

REFERENCE ONLY

DART

9.5

DELAMINATION REPAIR

SECT.	DESCRIPTION	DIAGRAM
9.5.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	
9.5.2	STRIP AWAY THE PLIES ABOVE THE DELAMINATION, LEAVING A DENT OPENING AS SHOWN.	
9.5.3	PATCH WITH PLIES TO MATCH THE DEPTH REMOVED USING 9 oz CLOTH AND RESIN. CURE AT ROOM TEMPERATURE.	
9.5.4	SMOOTH THE SURFACE.	
9.5.5	PAINT TO MATCH COLOR.	

REFERENCE ONLY

DART

Procedure Issue Date: 04.12.01

Issue No: 02

9.6 **EDGE CRACK REPAIR (FOAM CORE PANEL)**

SECT.	DESCRIPTION	DIAGRAM
9.6.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	
9.6.2	FOR CRACKS UP TO 1.0" (25 mm) IN LENGTH AND RESTRICTED TO THE SKIN LAY UP 2 PLIES OF 9 oz CLOTH WITH RESIN TO COVER THE DAMAGED AREA AS SHOWN. CURE AT ROOM TEMPERATURE.	
9.6.3	SMOOTH SURFACE.	
9.6.4	PAINT TO MATCH COLOR.	

REFERENCE ONLY

9.7 SKIN CRACK REPAIR (FOAM CORE PANEL)

SECT.	DESCRIPTION	DIAGRAM
9.7.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	<p>Diagram illustrating the preparation of a skin crack repair on a foam core panel. The repair area is defined by a 4.0" (100 mm) MAX. width. The repair area is divided into three sections: a central 1.0" (25 mm) section and two side sections, each 1.0" (25 mm) wide. Arrows labeled 'G' indicate the direction of the repair.</p>
9.7.2	LAY UP 2 PLIES OF 9 oz CLOTH AS SHOWN WITH RESIN. CURE AT ROOM TEMPERATURE.	<p>Diagram illustrating the lay-up of 2 plies of 9 oz cloth over the crack. The diagram shows the crack, the 2 plies of 9 oz cloth, the core, and the composite skin. The repair area is defined by a 1.0" (25 mm) width. The diagram is labeled SECTION G-G.</p>
9.7.3	SMOOTH SURFACE.	
9.7.4	PAINT TO MATCH COLOR.	

REFERENCE ONLY

DART

9.8

VOID REPAIR

SECT.	DESCRIPTION	DIAGRAM
9.8.1	PREPARE SURFACE, IN ACCORDANCE WITH SECTION 4.0 SURFACE PREPARATION.	
9.8.2	DRILL 2 HOLES Ø0.125" (3 mm) AT LEAST 0.5" (13 mm) APART.	
9.8.3	INJECT ADHESIVE INTO ONE HOLE UNTIL IT FLOWS FROM THE OTHER HOLE (FILLING VOID).	
9.8.4	CLEAN UP EXCESS, AND CURE AT ROOM TEMPERATURE.	
9.8.5	SMOOTH SURFACE.	
9.8.6	PAINT TO MATCH COLOR.	

REFERENCE ONLY



***k Order ID 52500**

umber 38, 2009 11:34:39 AM

ID: 1350-589-041

don ID: C

Name: Side Door Assembly LH

Date: 09/28/09 Start Qty: 1.00

ired Date: 10/28/09 Req'd Qty: 1.00

rence: NCR09-085 / RA109094

rovals: Process Plan:

QC:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Setup Start

Stop

Run Start

Stop

nence ID/
rk Center ID

Operation
Description

Pick Kit

Set Up/
Run Hours

0.00

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

0.00

Memo

QC4- 100% Inspect kits for completeness

0.00

Memo

0.00

ality Control

Identify as per dwg & Stock Location: _____

0.00

0.00

Memo

Return to stock using the new batch #. New decals, labels, and paperwork are required with the new batch.

09-10-23